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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,994	05/30/2007	Carlos Fritsch Yusta	1379-1-035	1377

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EXAMINER	
TSAI, CAROL S W	

ART UNIT	PAPER NUMBER
2857	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,994	FRITSCH YUSTA ET AL.	
	Examiner	Art Unit	
	CAROL S. TSAI	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/30/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

2. Claims 4-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 3. See MPEP § 608.01(n). Accordingly, the claims 4-11 not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 4-11 depend on claim 1 that is related to as a process of manufacture; however, claims 4-11 contain a hybrid claims wherein, for instance, a system is defined merely in terms of the process for producing it.

7. Regarding claim 1, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

8. Regarding claim 2, the phrase "preferred" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "preferred"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

In the claim 1, it is not understandable what is meant by "r_i" since there was no definition described previously.

9. In the claim 2, it is not understandable what is meant by "just as it has been describe in the present patent application, there are various manner to achieve the physical embodiment".

10. In the claim 2, it is not understandable what is meant by "the sampling instant that corresponds to the first focus F_o is determined in non real time as based on the number of $N_A(K)$ of the master clock that are between the origin of times selected with the constraint that all times be positive".

11. In the claim 2, it is not understandable what is meant by "|*|".

12. In claim 2, "the geometry" lacks proper antecedent basis since "the geometry" was not described previously.

13. In claim 2, "the system" lacks proper antecedent basis since "the system" was not described previously.

14. In claim 2, "the medium" lacks proper antecedent basis since "the medium" was not described previously.

15. In claim 2, "said counter" lacks proper antecedent basis since "said counter" was not described previously.

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In claim 4, it is not understandable what is meant by "it being a particular case of the methodology exposed in the previous Claims".

In the claim 7, it is not understandable what is meant by "the focal correction codes have been stored for the current application".

In the claim 11, it is not understandable what is meant by "the methodology and constructive models described in this specification and shown in the attached figures below".

Note: Applicants are required to correct all errors listed above and errors not listed as well.

Claim Rejections - 35 USC § 101

16. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

17. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

18. The claims 1-14 recite nothing more than solve mathematical problems or manipulate abstract ideas or concepts are complex to analyze and are addressed herein. If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Gottschalk v. Benson, 409 U.S. 63, 71 - 72, 175 USPQ 673, 676 (1972). Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does

not manipulate appropriate subject matter and thus cannot constitute a statutory process. In practical terms, claims define nonstatutory processes if they: – consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or – simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application. Additionally, the claims do not fall into either of the "safe harbors" defined in the Guidelines for Computer-Implemented Inventions in that there is no manipulation of measured data representing physical objects or activities to achieve a practical application (pre-computer process activity) or the performance of independent physical acts (post-computer process activity). The examiner submits that the claimed method merely solves a mathematical problem without limitation to a practical application.

19. Signals Per se are not statutory subject matter. The combination of signals with statutory physical structure (readable memory) may be statutory subject matter if a useful, concrete and tangible result is produced. Claims to data structure (signals) stored in a memory are statutory subject matter because of the statutory nature of the memory. In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency).

20. A process is statutory if it requires physical acts to be performed outside the computer independent of and following the steps to be performed by a programmed computer, where those acts involve the manipulation of tangible physical objects and result in the object having a different physical attribute or structure. A claim is limited to a practical application when the

method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See AT &T, 172 F.3d at 1358, 50 USPQ2d at 1452. The claimed invention is directed to non-statutory subject matter because the method does not transform an article or physical object to a different state or thing (NOTE: transformation of data is not "physical transformation," nor are physical acts necessarily a "physical transformation.") and does not produce a concrete, tangible and useful result.

21. With respect to claim 1, the result is "ensuring that each sample of the resulting signal … is obtained by the sum of the N samples …." which is not tangible and not useful because this result of "that each sample of the resulting signal … is obtained by the sum of the N samples ….is ensured" is not being conveyed to someone or something for making its usefulness immediately apparent to those familiar with the technological field of the invention. Brenner v. Manson, 383 U.S. 519, 148 USPQ 689 (1966); In re Ziegler, 992 F.2d 1197, 26 USPQ2d 1600 (Fed. Cir. 1993). The examiner submits that the claimed method merely manipulates an abstract idea without limitation to a practical application because claims that do not result in physical transformation cover mental processes and therefore attempt to patent human intelligence in of itself are nonstatutory. In other words, although the claim appears to fall into a statutory category (process), they are not truly process claims because it does not manipulate subject matter of difference statutory category.

Claim Rejections - 35 USC § 102

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

23. Claims 1 and 2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,845,639 to Hochman et al.

24. With respect to claims 1 and 2, Hochman et al. disclose a method for beam forming at reception called Progressive Focal Technique intended for applications in which a diversity of N transducers grouped in an array receive vibratory energy from foci Fio, i=0, 1, 2..., located along a programmable direction, wherein it samples the signal received in each channel at the arrival instant from each focus with an absolute error lower than half a period of a master clock with a T_x period, in such a manner that the consecutive samples e_{ki}, i=0, 1, 2 ..... obtained in each channel k correspond to the consecutive values of the signal originated at each focus $F_{io,}$ i=0, 1, 2 ..... ensuring that each sample of the resulting signal r_{io}, i=0, 1, 2 .... is obtained by the sum of the N samples e_{ki}, k=l, 2,..., N: ..... where the Ak coefficients are fixed or programmable values, operation which is called summation or coherent composition of the N signals (see col. 6, lines 33-63).

Contact Information

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROL S. TSAI whose telephone number is (571)272-2224. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramos-Feliciano S. Eliseo can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 23, 2008
Art Unit 2857
/Carol S Tsai/
Primary Examiner, Art Unit 2857